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Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

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In the Matter of )

Allocation of the )  
219-220 MHz Band for Use by )  
the Amateur Radio Service )

ET Docket No. 93-40  
RM-7747

To: The Commission

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REPLY TO OPPOSITION TO PETITION FOR RECONSIDERATION

Fred Daniel d/b/a Orion Telecom (Orion), by his attorneys, hereby files his reply to the Opposition to Petition for Reconsideration filed by The Amateur Radio Relay League, Incorporated (ARRL) in the above captioned matter. In support of its position, Orion shows the following.

ARRL Failed To Deal With A Primary Issue

ARRL failed to deal with a primary legal issue raised by Orion, namely, that the Commission was not reasonable in adopting rules which Orion demonstrated would not meet the objectives which the Commission had announced for the rule making proceeding. Orion demonstrated that the Commission's action will not relieve the congestion that exists in the most populous areas of the nation, and will not provide a regional or nationwide network that can be used for emergency and national defense communications purposes. To be found reasonable, the rules adopted by the Commission must at least plausibly be seen to meet the objectives which motivated their adoption. Since the rules which the Commission adopted

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obviously will not effectuate the objectives announced for them, the Commission would not be legally justified in retaining them.

The Geographic Separation Adopted Is Insufficient To Prevent Harmful Interference

The Commission's action in its Report and Order relieved Orion of any need to present a technical report concerning interference potential. The Commission acknowledged at paragraph 30 of its Report and Order in the above captioned matter that the geographic separation which it adopted would not be sufficient to assure AMTS systems of non-interference during all reasonably foreseeable circumstances.<sup>1</sup> Since the Commission recognized that there were reasonably foreseeable circumstances under which the geographic separation which it adopted would not be sufficient to provide protection to AMTS stations, the Commission's action was unreasonable and unlawful on its face and should be revised to provide the degree of geographic separation which Orion and Paging Systems, Inc. had indicated would be necessary to assure AMTS systems of primary status and non-interference.

ARRL is already "pushing the envelope" and the Commission should pull in back into proper shape. The Commission stated that "no amateur station may operate in the 219-220

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<sup>1</sup> Specifically, the Commission stated that less separation than had been requested by Orion and by Paging Systems, Inc. "will prevent interference under all but rare propagation conditions." In its opposition, ARRL acknowledged that "certainly enough, instances of topographic during could cause signals of any type to propagate over long distances," Opposition at 3.

MHz band within 80 km radius of an AMTS station without written approval from the appropriate AMTS licensee," Report and Order at para. 31. In its opposition, ARRL suggested that "Orion's argument fails to account for frequency shifts within the band to accommodate AMTS stations in a particular location," thereby indicating that the Amateur community represented by ARRL has no intention of complying with the Commission's determination that there would be no Amateur operation within a defined radius of an AMTS station. Orion did not take "frequency shifts within the band" into account because the Commission's determination is clear; "no amateur station" within a certain area means no amateur station. If the Commission does not now withdraw its action allocating the band to the Amateur Radio Service, it is clear that ARRL is already set on a course of imploring the Commission to disregard any decision by an AMTS operator not to approve a proposed Amateur station in the band. In view of ARRL's self-disclosed plan of trying to engage in unlimited debate of an AMTS licensee's decision not to approve a proposed Amateur station, the Commission should preserve its scarce administrative resources against future abuse by withdrawing the allocation from the Amateur Radio Service.

Although ARRL argued that "it would be wholly out of character to specify levels of directionality of antennas, frequency separation, cross-polarization of signals, and other interference avoidance techniques," Opposition at 7, while, at the same acknowledging that "according to the Atlantic Research study [upon which ARRL had relied in its petition for rule making], polarization discrimination should afford at least another 12 dB of attenuation (conservatively stated). Furthermore, use of directional antennas with attenuation toward the

AMTS stations will provide ample protection against interference," Opposition at 5 n. 4. Both the Commission and ARRL appear to agree that "we believe that by using directional antennas, frequency separation, cross polarization of signals, and other interference avoidance techniques, amateurs will be able to establish interference free operations," Report at Order at para. 12. If, as ARRL appears to acknowledge, directional antennas will provide ample protection against interference, then its opposition to the Commission's adopting interference protection technique requirements consistent with the Commission's findings of what is necessary for interference free operations is not logical. ARRL should be willing to have the Commission adopt rules which will require the techniques which the Commission found necessary for amateurs to establish interference free operations, and, on reconsideration, the Commission should adopt such necessary rules.

#### More Detailed Notification Rules Are Needed

ARRL's sample notification form represents a good and sincere effort by the representative of the Amateur community to carry out its responsibilities. However, the Commission's Rules need to be more definitive about what a notification must include. While ARRL can be relied upon to respond to a notifying Amateur by requesting certain information, all that new Rule Section 97.303(e)(3) currently requires the Amateur to do is notify ARRL of the "station's specific geographic location," 47 C.F.R. §97.303(e)(3). To be sure that ARRL is supplied with the necessary quantity of information in a notification, Rule Section 97.303(e) should be amended to specify the information required to constitute a complete and lawful notification.

ARRL's sample notification form demonstrates additional reasons why the Commission should require an Amateur operator proposing to operate a station in the band to provide certain information in a notification. Among the essential elements to an AMTS operator's making meaningful use of an Amateur notification are the effective radiated power in the direction of the AMTS station, and a plot of the horizontal radiation pattern of the proposed antenna, yet ARRL did not include those items in its interim notification form, even after receiving Orion's petition for reconsideration. Therefore, it is clear that if AMTS operators are to be provided with meaningful notifications from Amateurs, the Commission needs to adopt rules which specify the minimum contents of such a notification.

One further amendment should be made to the notification rule. Although new Rule Section 97.303(e)(4) states that "no amateur station may transmit in the 219-220 MHz segment from a location that is within 640 km of an AMTS Coast Station unless the amateur station licensee has given notification," and that "AMTS Coast Station locations may be obtained from either" ARRL or Interactive Systems, Inc., the rule does not presently call to the Amateur's attention that a search of license records for the 219-220 MHz band will fail to find any AMTS station. Rather than being in the 219-220 MHz band, AMTS stations are authorized in the 216-220 MHz band. Therefore, to guide the amateur toward a meaningful search for AMTS Coast Station locations, the last sentence of Rule Section 97.303(e)(4) should be revised to read as follows:

"Locations of AMTS stations in the frequency band 216-220 MHz may be obtained either from:".

While ARRL's inclusion of a statement by the Amateur that "I will make any station modification, including cessation of operation if necessary, that may be required to resolve a complaint of harmful interference to a radiocommunication service listed herein," demonstrates good intent by ARRL, ARRL has no power of enforcement. To provide the Commission with the necessary foundation to take compliance action against a recalcitrant Amateur, the Commission should set forth in its rules the requirement for immediate cessation of interfering operations by an Amateur operator.

ARRL raised an issue which had not been apparent earlier, namely, that the Commission needs to adopt a minimum emission bandwidth requirement. At paragraph 21 of the Report and Order, the Commission stated that "we find that 100 kilohertz channels are appropriate" for the band, and that "this allocation is intended primarily for wideband operations, and the 100 kilohertz channels are appropriate for this purpose." In new Rule Section 97.307(f)(13), the Commission adopted an authorized bandwidth of 100 khz. ARRL's sample notification form would encourage Amateur use of an emission bandwidth of only 70 khz, and ARRL's 219-220 MHz Band Plan states that "transmissions should be centered in the channel, even if the transmission does not occupy the full 100 kHz of the channel." Taken together, it would appear that some elements of the Amateur community might be led to believe that they should be able to operate with a transmitter power of 50 watts, while spreading that power over a bandwidth of substantially less than 100 kHz. To assure that Amateur operators do not inadvertently increase the interference potential of a station above that anticipated by the Commission's action, the Commission should adopt a

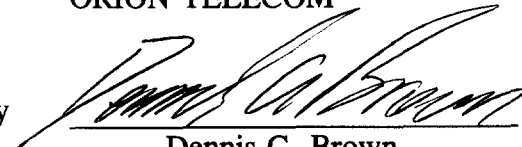
rule which derates the maximum permissible power in relation to the percentage of the channel over which an emission is spread. If the Amateur operator's emission bandwidth is 100 kHz, then use of 50 watts should be permitted; if the emission bandwidth employed is 25 kHz, then the maximum power should be derated to 12.5 watts, and so forth, to assure that the density of emission within any given band does not exceed the equivalent of 50 watts spread over 100 kHz.

#### Conclusion

For all the foregoing reasons, Orion respectfully requests that the Commission reconsider its Report and Order in accord with the relief requested herein.

Respectfully submitted,  
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By



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CERTIFICATE OF SERVICE

I hereby certify that on this twenty-fourth day of May, 1995, I served a copy of the foregoing Reply to Opposition to Petition for Reconsideration on each of the following persons by placing a copy in the United States Mail, first class postage prepaid:

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